

Notice of Allowability

Application No.

10/658,218

Examiner

Michael P. Mooney

Applicant(s)

RIDGWAY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Terminal Disclaimer filed 8/22/05.
2. ☒ The allowed claim(s) is/are 1-50 and 64-68.
3. ☒ The drawings filed on 09 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 8/04, 12/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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Applicant's election of claims 1-37, 39, 43-47, and 64-68 in the reply filed on 6/10/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

This application is in condition for allowance except for the presence of claims 51-63 to invention(s) non-elected without traverse. Accordingly, claims 51-63 have been cancelled.

Linking claim 1 is allowed. Since the restriction requirement among inventions as set forth in the Office action mailed on 6/3/05 was conditioned on the nonallowance of the linking claim(s), **the restriction requirement as to the linked inventions is hereby withdrawn.** Claims 38, 40-42, 48-50 previously withdrawn from consideration as a result of the restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement as to the linked inventions, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The terminal disclaimer filed on 8/22/05 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,931,164 B2 has been reviewed and is accepted. The terminal disclaimer has been recorded.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art, either alone or in combination, does not disclose or render obvious an electrooptic modulator comprising an optical waveguide, a cladding optically coupled to said optical waveguide, an optically functional cladding region defined in at least a portion of said cladding, and a modulation controller configured to provide a modulating control signal to said optically functional cladding region, wherein: the bias component of the biased modulating RF control signal defines a magnitude that is at least an order of magnitude larger than said drive components in combination with the rest of claim 1.

It is noted that the claim 1 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious an electrooptic modulator comprising an optical waveguide, a cladding optically coupled to said optical waveguide, an optically functional cladding region defined in at least a portion of said cladding, and a modulation controller configured to provide a modulating control signal to said optically functional polymeric cladding region, wherein: the optically functional polymeric cladding region comprises a polymer/chromophore blend

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or a polymer with a chromophore attached as a side chain and is characterized by a degree of chromophore mobility sufficient to enable transition of said optically functional region between a substantially oriented state and a substantially isotropic state at a frequency in excess of about 1GHz in combination with the rest of claim 66.

It is noted that the claim 66 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious an electrooptic modulator comprising an optical waveguide, a cladding optically coupled to said optical waveguide, an optically functional cladding region defined in at least a portion of said cladding, and a modulation controller configured to provide a modulating control signal to said optically functional polymeric cladding region, wherein: the optically functional region of said cladding defines a refractive index approximating a function that varies with a square of a magnitude of said control signal in combination with the rest of claim 67.

It is noted that the claim 67 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious an electrooptic modulator comprising an optical waveguide, a cladding optically coupled to said optical waveguide, an optically functional cladding region defined in at least a portion of said cladding, and a modulation controller configured to provide a modulating control signal to said optically functional polymeric cladding region, wherein: the cladding medium is configured such that successive phase shifts $\Delta\phi$ of 180

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degrees are introduced in said optical signal as a magnitude of said control voltage is increased in successive increments $V_{\text{sub}\pi}$ and such that successive increments $V_{\text{sub}\pi}$ decrease in magnitude as said magnitude of said control voltage is increased in combination with the rest of claim 68.

It is noted that the claim 68 is allowable because the unique combination of each and every specific element stated in the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

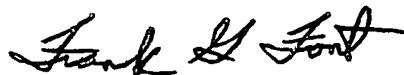
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-

1562.

A handwritten signature in cursive script, reading "Michael P. Mooney".

Michael P. Mooney
Examiner
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A handwritten signature in cursive script, reading "Frank G. Font".

Frank G. Font
Supervisory Patent Examiner
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FGF/mpm
9/2/05